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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/648,111 | 08/25/2000 | Kwang-Jo Hwang | 3430-0131P | 5562 |
| 7590 | 01/03/2006 | | EXAMINER | |
| Birch Stewart Kolasch & Birch LLP PO BOX 747 Falls Church, VA 22040-0747 | | | RICHARDS, N DREW | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2815 | |

DATE MAILED: 01/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|---|------------------------|---------------------|
| Advisory Action Before the Filing of an Appeal Brief | Application No. | Applicant(s) |
| | 09/648,111 | HWANG, KWANG-JO |
| | Examiner | Art Unit |
| | N. Drew Richards | 2815 |

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 20 December 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) The period for reply expires 3 months from the mailing date of the final rejection.
- b) The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because

- (a) They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) They raise the issue of new matter (see NOTE below);
- (c) They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. Applicant's reply has overcome the following rejection(s): See Continuation Sheet.

6. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. For purposes of appeal, the proposed amendment(s): a) will not be entered, or b) will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: 1-11 and 13-31.

Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.

12. Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____.

13. Other: See Continuation Sheet.



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Continuation of 5. Applicant's reply has overcome the following rejection(s): The rejections under 35 USC 112, 1st paragraph are withdrawn in view of applicant's amendment.

Continuation of 11. does NOT place the application in condition for allowance because: Applicant's arguments are not persuasive. Applicant has argued that none of the applied references teach reducing the binding force in the metal layer so as to enhance the etch rate. This is not persuasive since, as explained in the previous rejections, the binding force of the metal layer will necessarily be reduced in using the plasma treatment process of Chen in the method of Hirano. Applicant further argues that the present invention does not modify the properties of the resist. This is not persuasive because the language of the claims does not preclude the properties of the resist being modified. Applicant also argues that adapting the plasma of Chen to modify the metal impermissibly changes the principal of operation of Chen. This is not persuasive because the rejection does not rely on adapting the plasma. Further, the combination does not impermissibly change the principal operation of Chen since the necessary result of the metal being modified does not change or affect Chen's teaching of the resist becoming more resilient due to the plasma treatment. Applicant also argues that the Examiner asserts on page 3 lines 7-14 of the 2/3/05 Office action, that lowering the internal binding force in the metal layer is a result effective variable. This is not persuasive as a review of the 2/3/05 Office action makes it clear that the Examiner does not refer to this feature as a result effective variable. However, lowering the binding force is a necessary result of the process since performing the plasma treatment of Chen in the method of Hirano is the same process as claimed. Lastly, Applicant argues that "the Examiner tacitly admits that the combination of Chen with Hirano fails to fairly disclose or suggest each and every element of the independent claims." This is not persuasive as the Examiner has made no such admission or suggestion. In pointing out that neither reference explicitly discloses lower the internal binding force and then explaining how this feature is nonetheless a necessary result of the process, the Examiner clearly shows that the references taken together do fairly disclose or suggest each and every element of the independent claims..

Continuation of 13. Other: Claims 1-11 and 13-31 are rejected under 35 USC 103(a) as fully explained in the Office action mailed 2/3/05. Following applicant's latest amendment, the claims are the same claims that were rejected in the 2/3/05 Office action.